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MEDICAL RESEARCH LABORATORY

FORT KNOX, KENTUCKY

INDEXED

Second Partial Report

On

PROJECT NO. 8 - PRESELECTION TESTS

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ARMORED MEDICAL RESEARCH LABORATORY  
Fort Knox, Kentucky

Project No. 8  
220.105 SPMEA

22 April 1944

1. PROJECT: No. 8, Preselection Tests. Second partial report.

a. Authority - First indorsement, dated November 26, 1942, by Commanding General, Headquarters Armored Force, Fort Knox, Kentucky, file 400.112/6 GNOHD, to letter Armored Force Medical Research Laboratory dated November 10, 1942.

b. Purpose - To critically analyze some of the physical characteristics of the personnel of the 16th Armored Division and to demonstrate the value of such additional information in classification.

2. DISCUSSION:

a. A general physical and dental examination, together with seven special test procedures, selected because of their applicability to Armored Unit functions, were given to all men of the 16th Armored Division at Camp Chaffee during the summer of 1943. (See Appendix A.)

b. The information obtained was used by Classification, by the Division Surgeon and by unit commanders in several ways:

(1) To aid in the classification and assignment of fillers.

(2) To find and eliminate quickly men who do not belong in a combat unit.

(3) To define the magnitude and urgency of the division dental and optical problems.

(4) To segregate those who would need special medical attention during basic training.

(5) To supply company commanders with information concerning the limits of capabilities of their men during the early stages of training.

(6) To carefully control and elaborate on a commonly used drivers aptitude test.

3. CONCLUSIONS:

a. Systematic consideration of the physical characteristics and limitations of men adds to the effectiveness of classification in unit and military occupational specialty assignment.

b. The addition of physical preselection tests to the S.O.P. of





reception and classification is both feasible and practical and does not significantly delay the beginning of training.

c. Without the use of medical data, except in a very few rare specialties, present classification procedures do not provide enough useful information and can do little better than could be achieved with random selection.

4. RECOMMENDATIONS:

a. That the machinery for classifying men by physical qualifications be made available to all new units.

b. That the results of such classification be given maximal consideration in duty assignments.

(NOTE: The conclusions and recommendations set forth above have been concurred in by Headquarters, Armored Center, W. H. Nutter, Colonel, G. S. C., Chief of Staff)

Prepared by:

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APPROVED

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WILLARD MACHLE

Colonel, Medical Corps  
Commanding

4 Incls:

- #1 - Appendix A, 16th Armd. Div. Analysis
- #2 - Appendix B, S.O.P. of Procedure
- #3 - Appendix C, Score Sheet







## APPENDIX A

1. Preselection implies the ability to define in advance the probable capacities of men to perform tasks assigned to them. Successful preselection requires a knowledge of both the men and the tasks. It is the normal function of the classification officer, and it is self-evident that the earlier it can be done the better. A very elaborate and streamlined system has been devised by which the classification officer carries out his function both at induction centers and at first duty assignments.

2. Since the primary function of the induction center is to supply an enormous pool of man power for a vast number of military requirements, it is probably not possible and certainly not practicable to delineate at this point the capacities of men beyond certain very general categories, i.e., fit for combat duty or fit for non-combatant duty in the various Armed Forces, according to a priority system determined by the War Department.

3. At induction centers or man power pools, men assigned to the Army are given a general intelligence and psychological test (A.G.C.T.) and one or more of several special aptitude tests, such as clerical aptitude, mechanical aptitude, code aptitude, etc., in an effort to learn something about the capacities of every man. This information, together with his past occupational, educational, familial and economic history is put on a punch card (Form 20) which accompanies him wherever he goes thereafter.

4. Men are then assigned to one of the three forces (A.S.F., A.G.F., or A.A.F.), the bases of selection being age, physical status and the above mentioned tests. Each Force Headquarters assigns its men to a specific unit (in the A.G.F. usually a division or a replacement training center). The only information accompanying a man to this first duty assignment is the Form 20. (Subsequent discussion will apply only to A.G.F.)

5. At the unit, and for illustrative purposes a division will be used, the classification officer attempts to distribute men according to their capacities and in relation to the demands of the various tasks of that particular division. A knowledge of the divisional job requirements, the information on the Form 20 and a three minute personal interview with each man constitute the basis of selection.

6. Every effort is made to insure proper assignment in the small units and by tasks so that a minimum of re-arrangement is necessary after basic training begins.

7. The objectives of this classification procedure as applied to combat units (A.G.F. primary consideration) may be defined as follows:

a. To assign men to the military occupations for which they are best fitted in terms of the specific requirements of the organization involved.

(1) To locate immediately the men with adequate previous experience in those rarer and more difficult military specialties for which there is neither time nor the facilities for adequate training prior to commitment of

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the organization to action.

- (2) To distribute equitably within the organization both the good and the poor men whose capabilities are as yet unknown.

b. To reduce as far as possible wasted training time by immediate discovery and proper assignment of those men who will prove to be incompetent combat soldiers, including:

- (1) Those who do not belong in the Army.
- (2) Those who, by the nature of their limitations, are unfit for combat and must be re-assigned for duty within continental United States.
- (3) Those who, by the nature of their limitations, should perform only the non-combatant functions of the organization (unit) involved.

c. Such other functions as can be proved to be of value to the organization as a whole and which can be profitably carried out in conjunction with and without interference with the normal classification procedure; their chief aim being better preselection.

d. To base these assignments upon criteria which in practice will prove to be reasonably correct and will minimize the necessity of radical changes in assignments during the subsequent training period prior to combat.

8. How successfully these objectives can be met depends in part upon the nature and completeness of the information used as a basis for classifications. At the present time, this information usually consists of the following:

- a. Age, sex, marital status, racial background and religion.
- b. Previous educational and occupational background.
- c. Chief interests and hobbies.
- d. General and specific aptitude test scores.
- e. A statement by the inductee of what he wants to do (if he knows).

f. A brief description of each of the military tasks inherent in that particular organization's primary and secondary functions.

g. A specific and detailed table of the number of men required to fill the various parts of the divisional table of organization.

9. With the limited information now available, classification can never be completely successful in placing every man in the task for which he is best fitted primarily because this information is not an adequate substitute

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for the trial and error method of selection inherent in the basic training procedures. In a sense, positive preselection--this man can do this particular job better than anyone else--is impossible. However, negative preselection--this man has not as good a chance of doing this particular job as well as many of his colleagues, but may be able to do any of a number of other tasks--is entirely possible. For example, a high school boy with no special training cannot be expected to become a competent cartographer in the allotted training time, but may be quite able to become a competent rifleman, truck driver, etc.

a. To a certain extent in all age groups, and particularly in the 18-19 age group, there is frequently no basis for assignment save alone intelligence test scores and educational background because there has been no previous work experience and no military experience. There is probably nothing which presents to the classification officer a problem for which he has a less ready answer than the 19 year old high school lad with an AGCT of 90 who simply says, "I just want to be a soldier, why else would I have joined." Another difficult problem is the man who thinks he doesn't want to be in the service at all and will give his interviewer no help.

10. It is obvious, therefore, that any additional information concerning the potential capabilities of men which can be supplied to the classification officer will increase his effective batting average. It is the purpose of this report to demonstrate the practical usefulness of easily available physical information in negative preselection and, more important, in saving training time (actually getting better results from a given amount of training time.)

11. The physical limitations to induction into the Army are not so severe as to ensure that all applicants accepted are physical equals. Many of the most important military occupations in combat require special physical qualifications. For example, a man who has only 20/100 vision without glasses cannot ever be expected to become a good tank gunner for the simple reason that he cannot see without glasses and he cannot use the tank optical equipment successfully with glasses. Again, men whose sitting height is greater than the distance between the seat and the roof cannot be expected to drive tanks satisfactorily even though they are perfect physical specimens. Color vision and depth perception play a most important role in the function of artillery observers. Foot defects primarily determine the limiting capacities of the infantry.

12. While physical examinations are done at induction centers, none of the information obtained accompanies the man to Classification at his first duty station. As a result, physical characteristics and limiting functional capacities are rarely if ever used by Classification in the initial unit and military occupational specialty assignments of Ground Force troops. One result of the lack of use of such information may be a very great deal of misdirected training time. For example, one may question the desirability of months of training in tanks of a large group of men when it could be determined in a few minutes in advance that 40% of the group have visual functional limitations which immediately make them far less likely of success in the optimal use of that arm than the other 60%. Granting that all men in an Armored Unit ought to know how to handle a tank, it would seem wise to spend a major portion of training time on those whose chances are good of being able to handle it well.

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13. The use of physical examination data in determining assignment can be and frequently is applied within larger units from the Regiment on down after classification. However, in smaller units, unless these characteristics are considered in unit assignment at initial classification, equitable distribution of men in terms of physical capabilities cannot be expected to follow.

14. A series of physical preselection tests applicable to the more important combat jobs of an armored division were devised and applied to all personnel of the 16th A. D. The purpose was primarily to save training time as well as to improve the likelihood of correct initial assignment by classification. The test procedures and measurements consisted of the following:

- a. A complete physical examination
- b. A complete dental examination
- c. Visual acuity
- d. Horizontal and vertical eye balance
- e. Depth perception
- f. Color vision
- g. Hand-eye reaction time
- h. Sitting height

15. The S.O.P. as used in the 16th A. D. (designed to handle in excess of 1000 men in 8 hours) will be found in Appendix B.

16. After the physical examination, each man was given a physical status rating as follows:

1. Probable candidate for C.D.D.
2. Acutely ill - hospitalize without delay.
3. Probable candidate for reclassification.
4. Acceptable but needs medical and/or surgical attention before going overseas.
5. Normal but too obese.
6. Normal but malnourished.
7. Normal.
8. Superior - athletes.

17. The dental and visual acuity examinations provided the surgeon with a complete dental and optical roster at once. No dental information was included in the physical status score because all such cases are considered remediable on first examination. They might have been classed 4 (acceptable after repair of defects), but this was deemed unnecessary because repair is already standard procedure with adequate machinery for handling the problem. One of the chief values derived from these examinations was and is that it apprizes the unit surgeon and the camp surgeon of the magnitude of the reparative task much earlier than does the usual routine and prevents missed examinations which frequently occur when such examinations are done by small units during basic training or later.

18. All other tests were scored as outlined on the Medical Corps Preselection Test score sheet (Appendix C). The sheet is coded for application to machine records cards and the card column numbers appear on the right mar-







gine They are for use by the machine records unit only.

19. Upon completion of all tests, each man is given a final M.C.P.T. score. This score consists of a direct application of the test findings to job analysis studies and results in a form of negative preselection. Score 1 or Class A is considered physically fit for any duty. It includes physical status classes 5 thru 8 with the provision that classes 5 and 6 need additional supervision during basic training. The scores achieved on the other six tests are all normal or better. Score 1 or Class A men have no physical limitations and are therefore potentially able to perform all tasks. No efforts toward specific positive preselection are made.

a. Score 2 or Class A<sub>1</sub>, are men fit for all but certain specified duties. This class consists of that group of men who are physically normal except for minor limitations which make it unlikely or impossible for them to perform a few specific tasks. The final scorer, a medical officer, must be familiar with the limitations of special tasks. When a man is scored 2 or Class A<sub>1</sub>, the specification number or numbers of the jobs he cannot do are written on the line below. (See Appendix C). For example, a man has a physical score of 8 and all tests are normal except that his sitting height exceeds 38". He is scored 2 or A<sub>1</sub>, and below are written the numbers 616, 736, 795; the specification numbers for tank crew men. This tells Classification that this man is first class material for all division assignments except tank jobs. The physical and functional limitations used for each of the more important combat tasks of an armored division are listed below in Table 1. Previous analysis of the 12th A. D. showed clearly that these limitations could be applied and still leave more than adequate numbers of men to fill all basic and special tasks. Evidence accumulated at the Armored School indicates that there should be a very definite age limitation for tank drivers--the younger the better. It was not used in the 16th A.D. Age not in excess of 22 years for drivers and not in excess of 28 for other crew members is suggested. There is no contra-indication to the use of these limits.

b. Score 3 or Class B is self-explanatory. The man is not combat material because of physical defects and should be reclassified before special combat duty training time is wasted on him. Score 4 or Class C includes those who should not have been admitted to the service and are immediate candidates for C.D.D.

c. The classification officer chose to carry this procedure a step farther and assigned to each M.O.S. specification number an acceptable M.C.P.T. score thereby putting the generally more fit men in the more rigorous tasks as well as carefully selecting the men for key tasks (Table 1).

20. This preselection procedure is carried out prior to classification. The final score sheet is carried to classification along with the Form 20. Classification proceeds as usual except that the additional physical information is used in unit and military occupational specialty assignments. Use of the procedure on two full divisions has clearly shown that it in no way slows or hinders normal classification procedures, and is of material aid in making military occupational specialty recommendations as well as unit assignments.





21. In order to facilitate a critical study of classification procedures the classification officer of the 16th A. D. agreed to add to the M.C.P.T. score sheet the pertinent information of Form 20, together with the final specialty assignment. (See Appendix C.) There is practical value in this procedure as used in the 16th A. D. Normally no physical information goes to the Company Commander and the Form 20 information goes down only to Battalion Headquarters. The M.C.P.T. score sheet was completed in duplicate and copies were sent to the Company Commanders so that each might have all available information on his men for use during the early phases of training before he had had an opportunity to know each man well. Company Commanders have already expressed enthusiastic approval of this procedure as has the Commanding General of the 16th A. D.

22. Each of the elements of the M.C.P.T. has been statistically analyzed and it is from them that the final conclusions and recommendations are drawn. Statistical analysis of this sample (the first 10,000 completed) indicates completely normal frequency distribution curves. Therefore the percentile distributions found herein are completely applicable to the entire division (in excess of 13,000 men). The analysis of these data follows:





TABLE 1

SCORE LIMITS FOR SPECIAL JOBS

JOB	SPEC. NO.	VISUAL ACUITY	EYE BALANCE HORIZ.	VERTIC.	DEPTH PERCEPT.	SITTING HEIGHT	COLOR VISION	PHYSICAL STATUS
Tank Commander	795	20/20	2 - 8	3 - 7	4 or more	38" or less	3	7 or more
Tank Driver	736	20/20			3 or more	38" or less	2 or more	6 or more
Tank Gunner	616	20/20	2 - 8	3 - 7	4 or more	38" or less	3	6 or more
Machine Gunner	(603 (604	20/20	2 - 8	3 - 7	4 or more		3	6 or more
Truck (Light	345	20/20			3 or more		2 or more	
Driver (Heavy	245	20/20 corrected			3 or more		2 or more	7 or more
Half Track Driver	735	20/20			3 or more		2 or more	7 or more
Half Track Comdr.	532	20/20	2 - 8	3 - 7	4 or more		3	7 or more
Reconnais. N.C.O.	744	20/20			4 or more		3	7 or more

\* Actually all driving and key task men had a color vision score of 3.





a. Age Distribution - The age distribution in numbers of men and as percents of the total population is shown in Table 2. Chart 1 is a graph of that distribution. The average of the men in the division was 25.55.

TABLE 2

AGE DISTRIBUTION OF MEN OF 16th A. D.

AGE GROUP	NO. OF MEN	% OF TOTAL
18-19	2385	24.4
20-24	2684	27.5
25-29	2403	25.6
30-34	1531	15.6
35-39	684	7.0
40 Up	76	0.8
No Data	14	0.1
TOTAL	9777	100.0%

b. Number of years in School - The educational background of the division personnel, as indicated by the number of years of school completed, is shown in Table 3 and Chart 2 for 5600 men. The percentile distribution is similar for the whole division, exclusive of officers.

TABLE 3

NO. YEARS SCHOOL	NO. OF MEN	% OF TOTAL
0	3	0.05
1	4	0.07
2	8	0.14
3	18	0.32
4	34	0.61
5	94	1.67
6	176	3.14
7	408	7.27
8	1,051	18.76
9	519	9.25
10	696	12.41
11	547	9.75
12	1,417	25.21
13	225	4.01
14	156	2.78
15	71	1.26
16	100	1.78
17	39	0.69
18	23	0.41
19	13	0.23
20 Up	8	0.14
TOTAL	5,610	99.95

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(1) It may be of interest to compare the number of years in school with the A.G.C.T. score on the same men. There is a very considerable correlation between the two. As will be apparent from a study of Table 4 below, if all men with less than 10 years of school were automatically given an A.G.C.T. score of more than II, the error would be only 3%; and if all of those with more than 12 years of school were given an A.G.C.T. score of less than III, the error would be 2.5%. The correlation coefficient is 0.6989  $\pm$  0.005. Where possible in this and in subsequent tables, the highest scores appear on the left and decrease toward the right.

TABLE 4  
CORRELATION BETWEEN YEARS IN SCHOOL & A.G.C.T.  
SCORE

No. Yrs. School	A. G. C. T. SCORE					No Data	No. Men	%
	I	II	III	IV	V			
0	1	1	0	0	0	1	3	0.05
1	0	0	0	3	1	0	4	0.07
2	0	0	1	5	2	0	8	0.14
3	0	1	5	9	3	0	18	0.32
4	0	1	1	23	9	0	34	0.61
5	0	1	7	73	13	0	94	1.67
6	0	1	18	141	12	4	176	3.14
7	0	8	88	286	20	6	408	7.27
8	4	80	336	600	23	8	1,051	18.76
9	6	66	240	198	6	3	519	9.25
10	7	139	360	186	2	2	696	12.41
11	16	145	272	99	0	6	547	9.75
12	90	651	556	101	0	19	1,417	25.21
13	33	132	50	7	0	3	225	4.01
14	24	96	32	3	0	1	156	2.78
15	19	43	6	1	0	2	71	1.26
16	25	59	14	0	0	2	100	1.78
17	13	24	2	0	0	0	39	0.69
18	5	14	3	0	0	1	23	0.41
19	4	9	0	0	0	0	13	0.23
20	3	4	1	0	0	0	8	0.14
NO. MEN	250	1484	1992	1735	91	58	5,610	99.95
%	4.46	26.44	35.51	30.90	1.60	1.04		99.95

c. Physical Status - In Table 5 are tabulated the physical status scores by age groups. Chart 3 shows quite clearly that there is an abrupt rise in the percentage of the physically unfit in the older age groups. Experience with both of these divisions strongly suggests that men above 34 years of age are not likely to become useful combat personnel.

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TABLE 5  
PHYSICAL STATUS

AGE GROUP	S C O R E									TOTAL	%
	8	7	6	5	4	3	2	1	No Data		
18-19	17	2186	17	11	95	46	3	7	3	2385	24.4
20-24	46	2194	15	29	239	140	0	13	8	2684	27.5
25-29	17	2038	13	38	160	124	0	10	3	2403	24.6
30-34	4	1270	7	30	140	71	0	7	2	1531	15.6
35-39	0	523	3	16	75	55	1	6	5	684	7.0
40 Up	1	34	0	5	14	20	0	2	0	76	0.8
No Data	0	9	0	1	3	1	0	0	0	14	0.1
TOTAL	85	8254	55	130	726	457	4	45	21	9777	100.0
%	0.9	84.6	0.5	1.3	7.9	4.7	0.04	0.4	0.2		100.04

(1) As was the case with the age distribution, there is no lack of physically fit specimens to perform the more rigorous combat tasks provided they are used for that purpose rather than for administrative, maintenance and supply tasks. 85% of this division were sound men on arrival and 90% of them were in age groups apt to be able to stand the rigors of armored unit activities. This is an excellent outlook.

d. Visual Acuity - Tables 6 and 7 show the visual acuity of all men by age groups.





TABLE 6  
VISUAL ACUITY - LEFT EYE

AGE GROUP	$\frac{20}{10}$	$\frac{20}{15}$	$\frac{20}{20}$	$\frac{20}{30}$	$\frac{20}{40}$	$\frac{20}{50}$	$\frac{20}{70}$	$\frac{20}{100}$	$\frac{20}{200+}$	No Data	No. Men	%
18-19	24	868	978	202	81	37	64	38	87	6	2385	24.4
20-24	52	1106	962	211	91	57	74	40	86	5	2684	27.5
25-29	21	876	936	244	100	57	63	22	76	8	2403	24.6
30-34	9	542	608	166	55	46	37	23	44	1	1531	15.6
35-39	1	217	279	75	43	20	22	6	19	2	684	7.0
40 Up	2	24	37	9	3	1	0	0	0	0	76	0.8
No Data	0	5	7	1	1	0	0	0	0	0	14	0.1
No. Men	109	3638	3807	908	374	218	260	129	312	22	9777	100.0
%	1.1	37.2	39.0	9.3	3.8	2.2	2.7	1.3	3.2	0.2		100.0

TABLE 7  
VISUAL ACUITY - RIGHT EYE

AGE GROUP	$\frac{20}{10}$	$\frac{20}{15}$	$\frac{20}{20}$	$\frac{20}{30}$	$\frac{20}{40}$	$\frac{20}{50}$	$\frac{20}{70}$	$\frac{20}{100}$	$\frac{20}{200+}$	No Data	No. Men	%
18-19	27	854	1004	188	64	56	55	26	108	3	2385	24.4
20-24	57	1114	951	219	81	64	61	39	94	4	2684	27.5
25-29	22	840	977	254	94	58	47	31	77	3	2403	24.6
30-34	11	526	632	174	62	32	45	17	31	1	1531	15.6
35-39	4	218	288	86	26	18	18	7	19	0	684	7.0
40 Up	1	25	36	10	1	1	2	0	0	0	76	0.8
No Data	0	6	7	1	0	0	0	0	0	0	14	0.1
No. Men	122	3583	3895	932	328	299	228	120	329	11	9777	100.0
%	1.3	36.7	39.8	9.5	3.4	3.1	2.3	1.2	3.4	0.1		99.7

Sheet #1





(1) In Chart 4, the visual acuity is plotted against age. The normal sight deterioration with age is apparent. There is another bit of information brought to light by this form of presentation which may be of very considerable importance if it is used. In all age groups with the exception of 20-24 years, the maximum distribution occurs at the accepted normal value of 20/20. In the 20-24 age group, however, this peak comes at 20/15. Inasmuch as both the younger and older age groups have less good vision than this group, it would appear that there is in this group a rapid maturation of maximum visual acuity which soon begins to decline. This limited age group has definitely superior vision and where possible could be used to advantage to perform tasks requiring unusually fine sight. The size of the group involved (2684 men) is too large for this to be an accidental finding. The technique of examination was rigid, constant, carefully supervised and the apparatus used was thoroughly standardized.

(2) In the whole division 5332 men (55%) have equal and normal or better than normal vision in each eye, and 7125 men (73%) have the equivalent of normal or better than normal vision in both eyes; both groups without glasses.

(3) In the whole range of visual acuity (normal and abnormal) 63% of all men have equal vision in both eyes. Among the 37% of unequals, exactly half (50%) have better vision in the right eye. The inequality of vision in the two eyes increases somewhat with age. In the two younger age groups, 34% have unequal vision and in the three older age groups, the average is approximately 41%. This analysis is of little interest to most units, but is of considerable importance to sight and periscope designers. The better eye is not necessarily the dominant (preferential) eye. Dominance was not measured.

e. Eye Balance - The extra-ocular eye muscles control eye movements and are responsible for normal stereo-vision. If one or more of the six muscles of each eye do not function properly, both eyes will not be focused on exactly the same point. One of the images is slightly offset in some direction. Frequently the individual is unaware of this defect. In spotting the accuracy of artillery fire and related tasks, normal stereo-vision is essential. For that reason, horizontal and vertical eye balance were measured. The standards set for normal are similar to those used by the U. S. Navy for direct fire gunners (vertical imbalance shall not exceed one prism diopter hyperphoria in either eye and horizontal imbalance shall not exceed 6 prism diopters esophoria and 4 prism diopters exophoria). Tables 8 and 9 show the distribution of normal and abnormal vertical and horizontal eye balance respectively.

TABLE 8  
VERTICAL BALANCE

	Right Hyperphoria				No Imbalance	Left Hyperphoria				TOTAL
	2D	1.5D	1D	0.5D		0.5D	1D	1.5D	2D	
No. Men	21	44	189	784	4282	2847	818	236	77	9298
%	0.2	0.5	2.2	8.4	46.0	30.6	8.8	2.5	0.8	100.0%





TABLE 9

## HORIZONTAL BALANCE

	Esophoria					No Imbalance	Exophoria			TOTAL
	10D	8D	6D	4D	2D	0	2D	4D	6D	
No. Men	66	220	650	1150	2013	2537	2020	512	124	9292
%	0.7	2.4	7.0	12.4	21.6	27.4	21.7	5.5	1.3	100.0%

f. Depth Perception - There are many techniques by which depth perception is measured. The one most commonly used by the Armed Forces is probably the peg-pulley test (Howard-Dollman) in which the subject is asked to manipulate, at a distance of 20 feet, two 2" by  $\frac{1}{4}$ " white pegs until they are side by side. This test does not correlate very well with a number of other procedures which do correlate with each other. In Armored units, the important and difficult stereo-vision tasks are done thru some type of visual aid, either telescopes, periscopes or field glasses. For that reason, depth perception was measured thru an optical device similar to the binocular visual aids commonly used by Armored personnel. The complete range of ability to correctly perceive in depth was not measured, but the poor men were eliminated. Table 10 shows the distribution of normal and poor men. The limiting score of 4 is roughly equivalent to an error of not more than  $\frac{1}{2}$ " distance between the two pegs in the Howard-Dollman test. Again there is a slight diminution in this eye function with age. 3.7% of the men in the 18-19 group are below acceptable standards and 4.7% are low in the 35-39 age group.

TABLE 10

## DEPTH PERCEPTION

	Depth Perception Score						TOTAL
	6	5	4	3	2	1	
No. Men	7325	844	641	191	70	153	9224
%	79.4	9.1	6.9	2.1	0.8	1.7	100.0

g. Sitting Height - In Armored units the size of a man is important because in tanks the distance between the seat and the overhead hatch is limited, as is the distance from the exit pupil of the periscope to the roof. Insofar as possible, the newer vehicles are built with the sizes of the various parts of the crew in mind. Certain compromises have had to be made. The most important of these is sitting height. No American tank will properly accommodate men whose sitting height erect and without normal slump is in excess of 38". Helmets, normal slump and seat adjustability have been taken into consideration in arriving at this value. The frequency distribution of the sitting heights of the 16th A. D. personnel are shown in Table 11 and in Charts 5 and 6.





TABLE 11

## SITTING HEIGHT IN INCHES

	Up to 32"	32" to 32.75	33" to 33.75	34" to 34.75	35" to 35.75	36" to 36.75	37" to 37.75	38" to 38.75	39" Up	TOTAL
No. Men	28	86	434	1397	2769	2904	1595	450	112	9777
%	0.3	0.9	4.4	14.3	28.4	29.7	16.3	4.6	1.1	100.0

h. Reaction Time - The hand-eye coordination reaction-time test outlined in Appendix B is sound in theory because there are no tricks by which the test can be beaten. The falling object falls by gravity and the time required to stop it is a function of the man. However, the apparatus as used proved to be inadequate, too crudely made and the procedure for doing the test was inadequately standardized. For that reason, no analysis of the reaction time data has been made. Development of an adequate timer on correct principles is in progress.

i. Color Vision - There are many procedures for measuring color vision, most of which attempt to determine whether a man has trichromatic (normal) vision or has the common dichromatism (partial color blindness) or the rarer monochromatism (complete color blindness). One might ask the question, "why measure color vision?" If it is important to the army, and it is, color vision ought to be measured in terms of the use to which it is to be put. For example, a textile man in a Quartermaster depot who needs to pass on color samples needs a different type of color vision test than the man who is a reconnaissance scout. In an Armored division, color probably plays a role in all of those who must observe fire and/or hunt for enemy installations. Normally, in most theaters for most months of the year, he is hunting for objects at a distance which blend with the ground and foliage. The dominant colors at such distances fade into brown and gray. Contrast is low. Therefore, if color vision plays a role, it would appear that a proper color test should, if possible, pick out those men who can detect small differences in color under such circumstances and certainly must weed out all of those who cannot pick up major differences in color; those to whom everything looks alike.

(1) An effort was made to devise such a test without complete success. Eight bright, high contrast, major spectral colors were laid before each man and he was asked to name them. All but the completely color blind (and less intelligent ones of the partially color blind group) can do so. Partly color blind men usually have learned which is which even though they do not see color well. Men who could name the colors received a score of 2; those who could not received a score of 1. The men were then given eight pastels derived from the same base colors and asked to match them with the original eight. Partially color blind men, particularly those who have learned how to beat most tests, are unable to make the right matches because it cannot be done by intensity of shade differences alone. Those who were able to correctly match the pastels received a score of 3; the others retained their original score of 2. Those not so far eliminated were then given eight gray colors each made up of black and white plus a very little of the original colors. There was a





blue gray, a red gray, etc. They were asked to match these with the pastels from which each was derived. Here the test broke down because the differences were too small for most men to detect. If the principle is sound, it will be possible to develop the right group of grays for this purpose. Table 12 shows the distribution of the scores achieved excluding the fourth group and weeds out the completely and partially color blind. Normal men make a score of 3, partially color blind men a score of 1 or 2 and completely color blind men a score of 1.

TABLE 12  
COLOR VISION

	S C O R E			TOTAL
	3	2	1	
No. Men	8962	311	489	9763
%	91.8	3.2	5.0	100.0%

21. Each of the above tests was scored on the score sheet (Appendix C) at the test station. When all had been completed, a final scorer marked the M.C.P.T. score 1, 2, 3 or 4 as indicated paragraph 19. The score necessary on each individual test to achieve a final score of 1 (fit for any duty) are as follows:

- a. Visual acuity, 20/20 or better each eye without glasses.
- b. Vertical balance, 3 - 7 inclusive.
- c. Horizontal balance, 2 - 8 inclusive.
- d. Depth perception, 4 or more.
- e. Sitting height, 38" or less.
- f. Color vision, 3 or more.

22. The distribution of final scores in age groups by numbers of men and by percent of the whole group are shown in Table 13 and are plotted in Chart 7.

TABLE 13  
M.C.P.T. SCORE

AGE GROUP	1	2	3	4	No Data	TOTAL	%
18 - 19	1480	761	127	7	10	2385	24.4
20 - 24	1525	785	352	13	9	2684	27.5
25 - 29	1305	806	277	9	6	2403	24.6
30 - 34	813	508	199	9	2	1531	15.6
35 - 39	328	228	121	6	1	684	7.0
40 Up	24	14	35	2	1	76	0.8
No Data	9	1	3	0	1	14	0.1
TOTAL	5484	3103	1114	46	30	9777	100.0
%	56.0	31.8	11.4	0.5	0.3		100.00

Encl #1





23. Fifty-six percent (56%) of all the men in this division are potentially able to perform any combat task insofar as their physical status is concerned. Thirty-two percent (32%) have some minor physical defect which excludes them from certain key tasks. These men are, however, potentially able to do all others. Twelve percent (12%) do not belong in a combat unit because, in terms of existing regulations, their defects are of such a nature that they can never be taken overseas. It is obvious that combat training time should not be expended on these men. The figure of twelve percent (12%) is similar to that found in the 12th A. D. and is also similar to the number eliminated for the same reasons from the 9th A. D. over a period of its first training year. The latter organization had no such test procedure and found these men only as they broke down during training.

24. The age factor is very important in determining the incidence of all types of defective men. Table 14 and Chart 8 are elaborations of Table 13 and show how the percent of useable personnel diminishes as the age rises.

TABLE 14

AGE GROUP	PERCENT		
	Score 1	Score 2	Score 3 & 4
18 - 19	62.0	31.9	6.1
20 - 24	56.8	29.2	14.0
25 - 29	54.2	33.5	12.3
30 - 34	53.0	33.2	13.8
35 - 39	48.0	33.4	18.6
40 Up	31.6	18.4	50.0

25. At Classification, an effort was made to use the information derived from this study as well as that normally employed. By comparing the military occupational specialty assignments with the limiting M.C.P.T. scores for each, one can determine to what extent the data were used. Careful analysis of the key tasks (Table 1) shows that only 81 misassignments were made in this group of 3633 recommended assignments to those tasks. (97.8% correct). On the basis of chance alone (presently used system) only 56% would have been correctly assigned (Table 13). If there was a serious conflict between the physical evidence and that normally used, Classification was free to use the latter. Classification was not appreciably slowed by the use of this data. (Corroborated by Captain Himmle, Classification Officer, 12th A. D. and Captain Nelson, Classification Officer, 16th A. D.

26. By a comparison of the specification number of civilian occupation with the recommended military occupational specialty, it is possible to show the extent to which men were assigned to tasks in which they had had previous experience. This figure is 7%. It represents no incompetence upon the part of the Classification personnel because by comparing the civilian occupational specification numbers with the specialty specification numbers of an armored division table or organization, one finds that the likelihood of correct choice could not possibly have exceeded 14% if no other factors played a role.



## 27. Summary

a. A type of physical information has been presented which plays an important role in determining the ability of any given soldier to perform the task assigned with optimal efficiency.

b. Some of the uses to which this information may be put in initial unit assignment and military occupational specialty assignments by Classification have been outlined.

c. The value of physical and physiological tests in conjunction with Classification both as a source of useful information and as a method of quickly weeding out those who will ultimately fail has been demonstrated.

d. The feasibility of practical application of the ideas propounded has been demonstrated.

e. The data have been presented in a form which makes it possible for any interested group to select its own acceptable limits in any category and still be sure that equitable distribution of manpower will result.

(1) Table 15 summarizes within the limits defined the results of the nine test procedures on 9777 men from all corps areas and all walks of life in the summer of 1943, the second year of the war.

TABLE 15

### SUMMARY OF DATA

	Percent Acceptable for All Tasks	Acceptable All but Key Tasks	Not Acceptable in Combat Organization
Age	74.6	24.4	1.0
Physical Status	86.0	8.8	5.2
Visual Acuity	73.0	27.0	0.2
Vertical Eye Balance	96.0	4.0	0.0
Horizontal Eye Balance	95.6	4.4	0.0
Depth Perception	95.4	4.6	0.0
Sitting Height	94.3	5.7	0.0
Color Vision	91.8	3.2	5.0
M.C.P.T. Score	56.3	31.8	11.9

f. The weakness of the currently used classification procedure as applied by combat divisions, namely, lack of sufficient information upon which to make assignments, has been pointed out.

g. A partial solution to that defect is offered.

h. In the opinion of the Laboratory, the use of the proposed scheme will save training time and will result in a more efficient army.

i. It is also believed that this type of information should be obtained





by the units involved rather than from induction center physical examinations for two reasons:

- (1) Induction center physical examinations are done under pressure and error is unavoidable. Repeat examinations pick up most of those errors.
- (2) Such examinations achieve their highest value when done for the purpose of describing the anatomical and physiological limits important to the specific functions of the unit involved. Induction centers cannot consider all of the factors which are of concern to each arm and service. In general, the attached medical personnel is adequate to perform this task for each unit.

j. This program does not attempt to define the specific capabilities of any man, it merely assures commanders that the quality of the material with which they have to work is the best available. It is negative preselection (See Par. 9, Appendix A) the purpose of which is to materially increase the effectiveness of selection and training.

j. Any unit can use this procedure. All that is required is that the unit commander, surgeon and classification officer jointly analyze the primary functions of the unit in action. Having defined the key jobs necessary to fulfill those functions, they can define the qualifications of men required to perform these tasks. It is then a simple matter for the surgeon to devise a physical testing program which will differentiate between those who have and those who do not have the required qualifications. Those who do have these qualifications will not all be successful, but the best men for each key task are far more likely to be found in this group than in those with anatomical and physiological limitations. The best infantrymen will not be found in the group with flat feet.

*Incl #1*

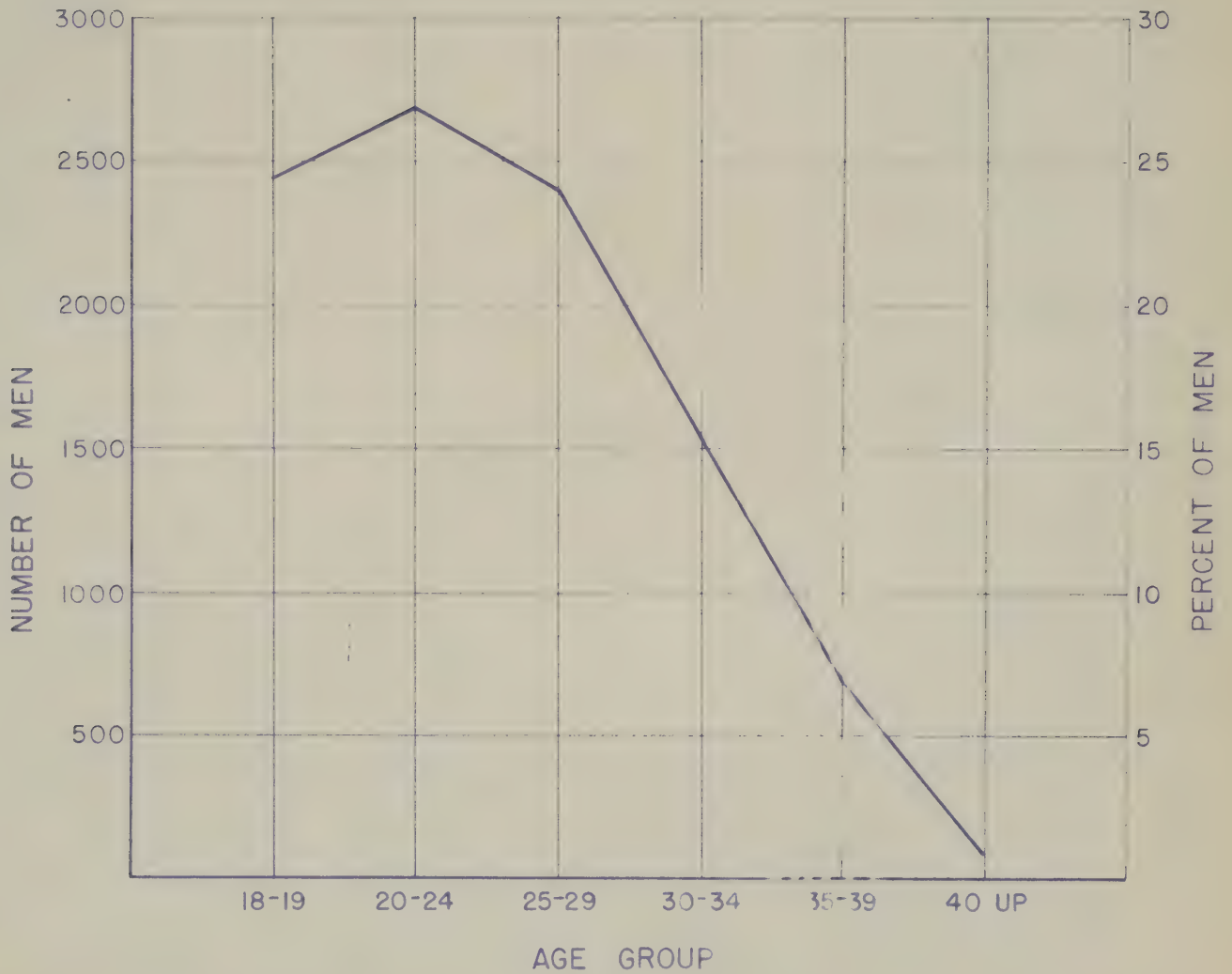




# CHART I

## DISTRIBUTION BY AGE

9777 MEN, 16th A. D.





# EDUCATIONAL BACKGROUND

5610 MEN, 16<sup>th</sup> A. D.

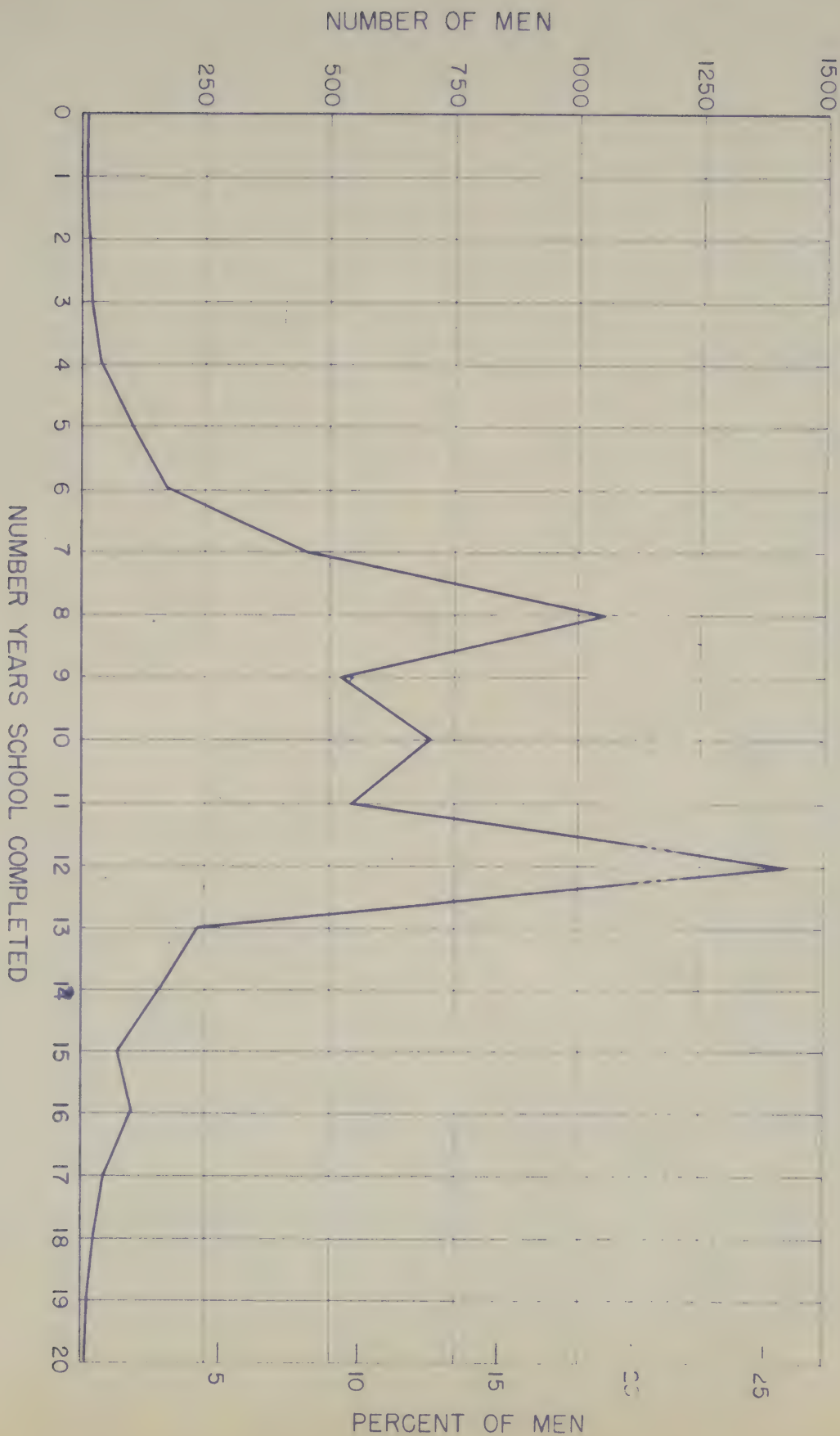


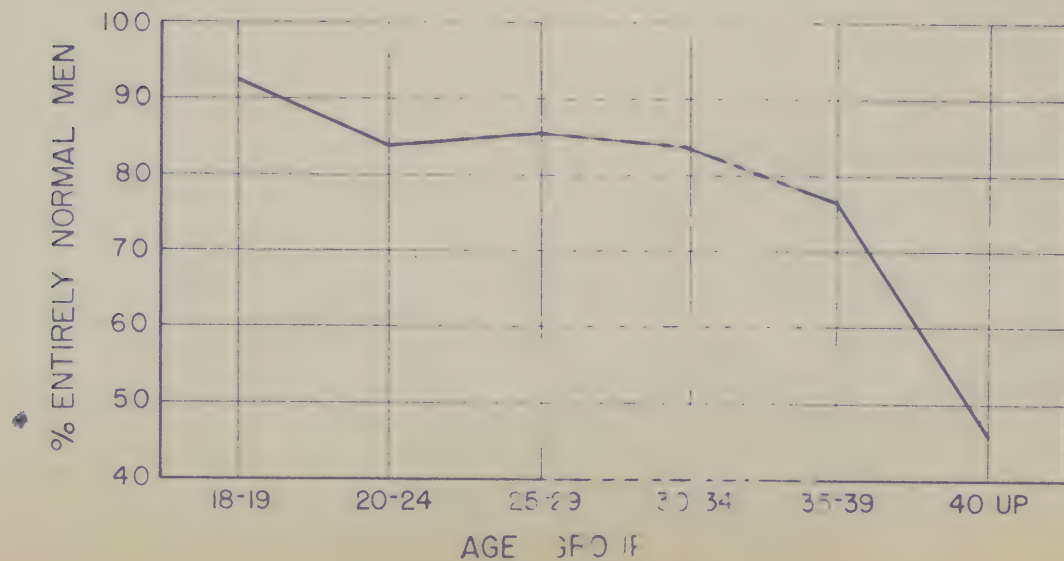
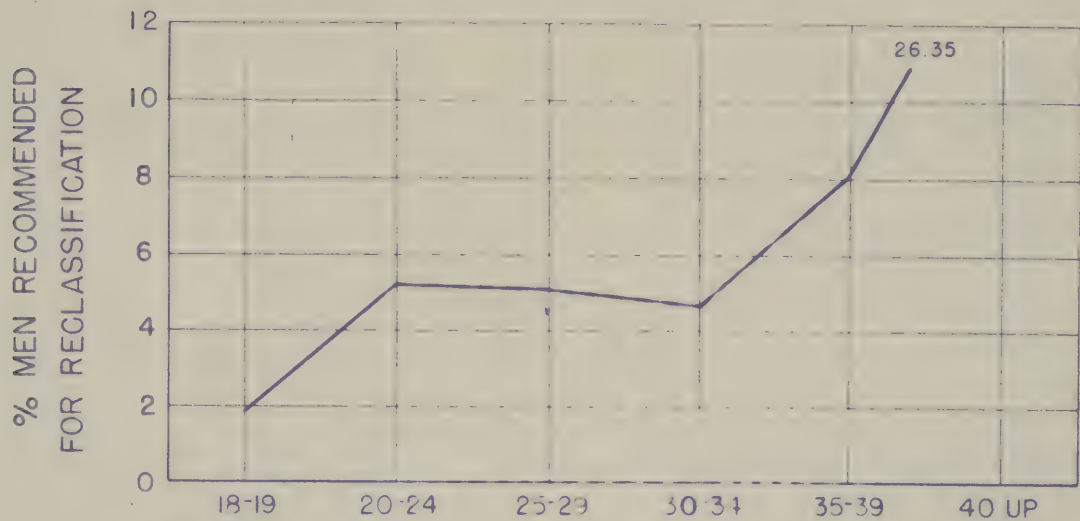
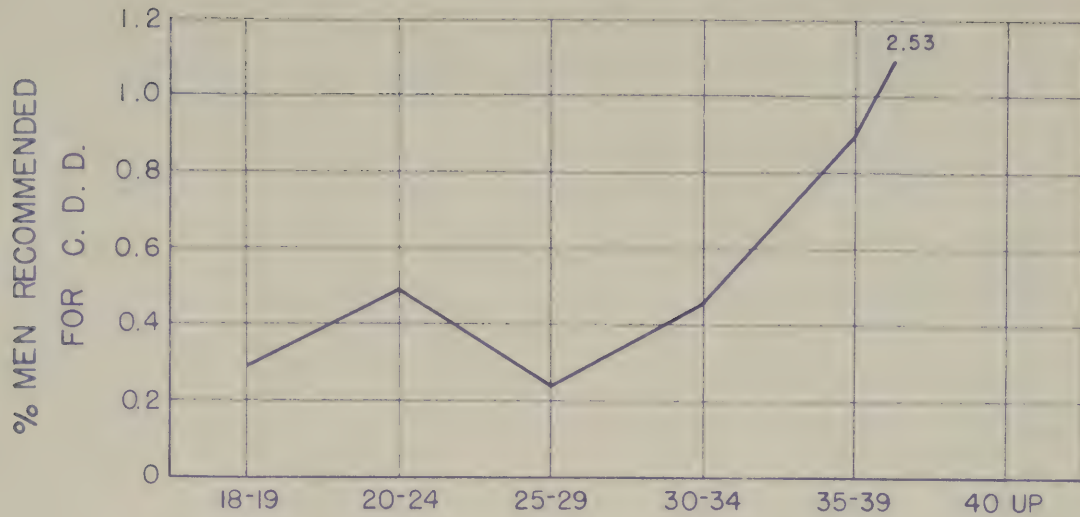
CHART 2





# CHART 3

## PHYSICAL STATUS VS AGE 9777 MEN, 16th A.D.



AGE GROUP

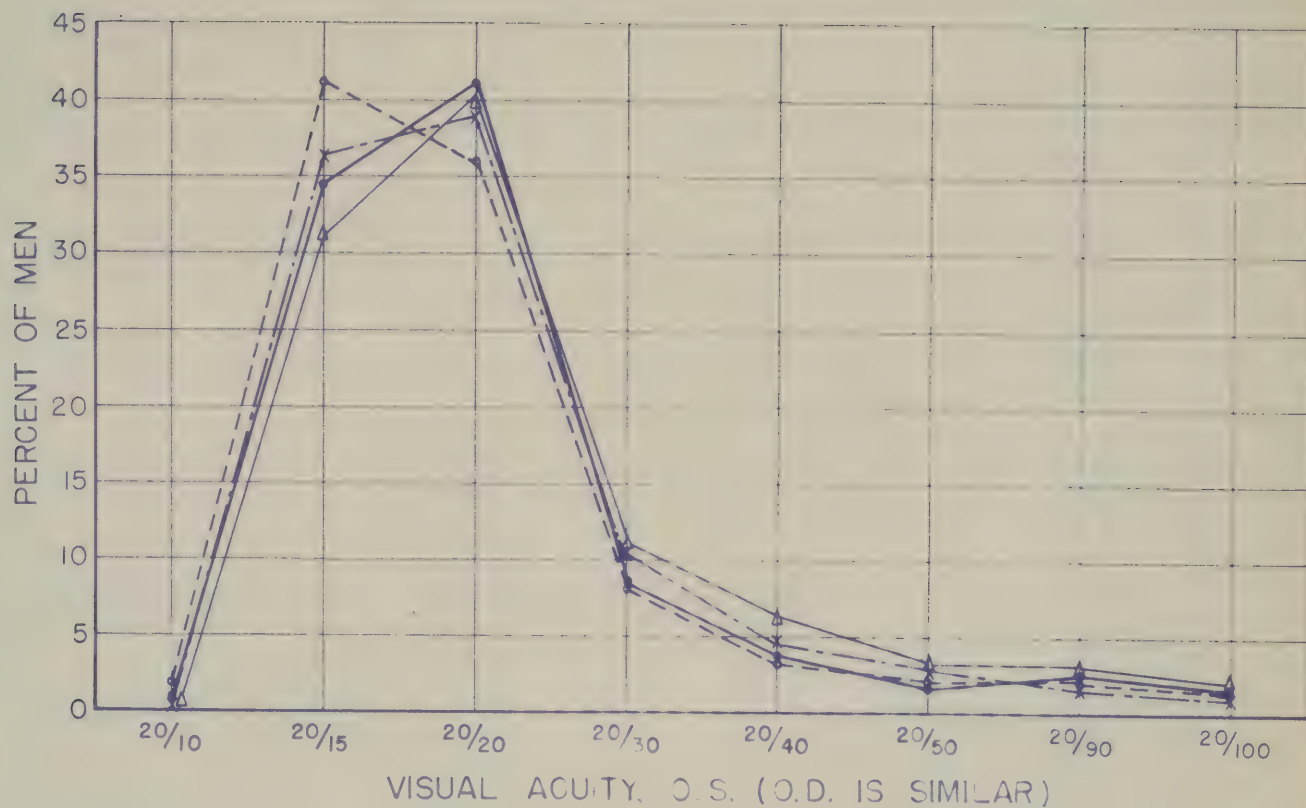
CHART 3





# CHART 4

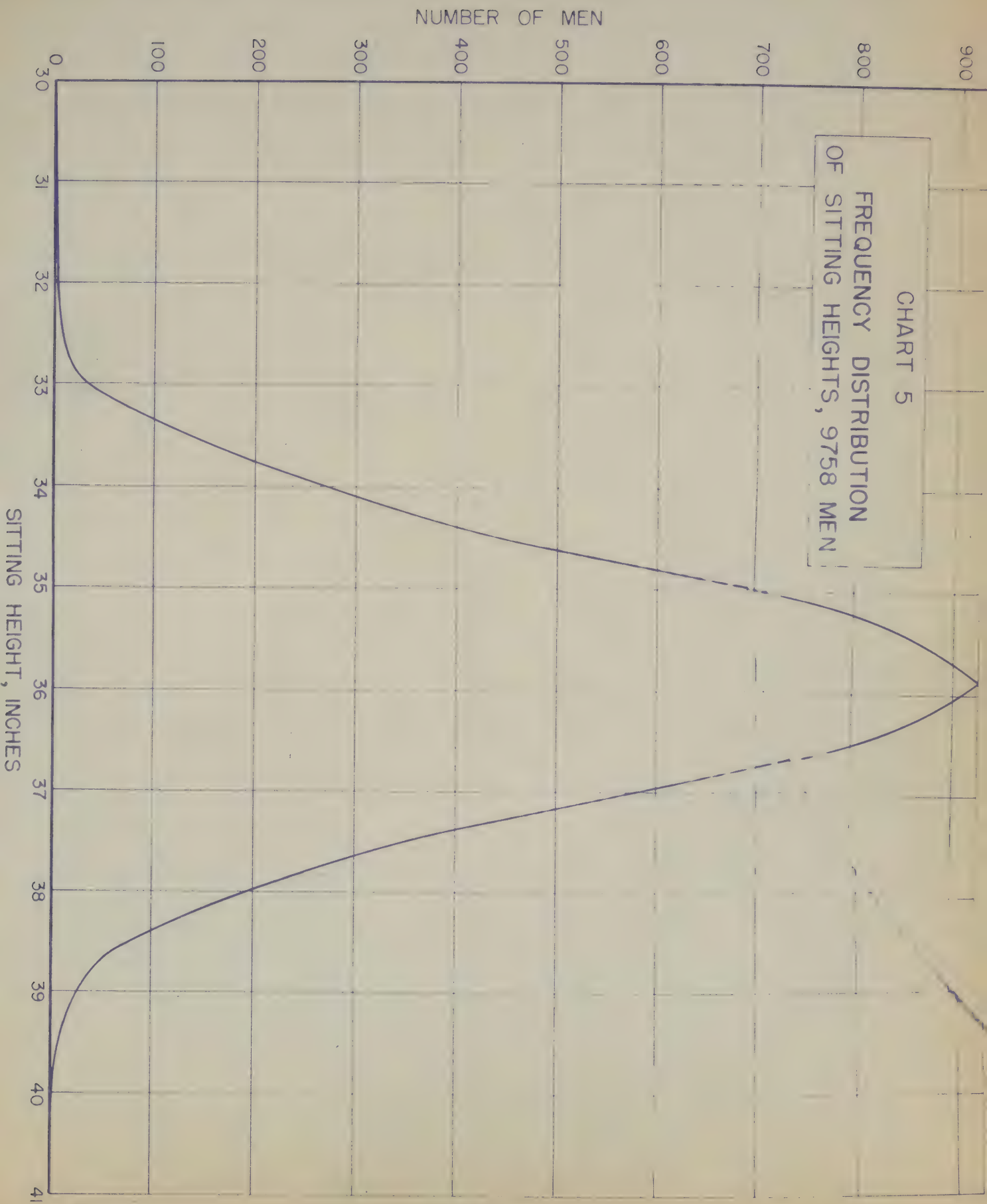
## PERCENTAGE DISTRIBUTION OF VISUAL ACUITY IN DIFFERENT AGE GROUPS



- — ● 18-19 YEARS (2385 MEN)
- - - - ○ 20-24 YEARS (2648 MEN)
- × · · · × 25-29 YEARS (2403 MEN)
- △ — △ 30-39 YEARS (684 MEN)



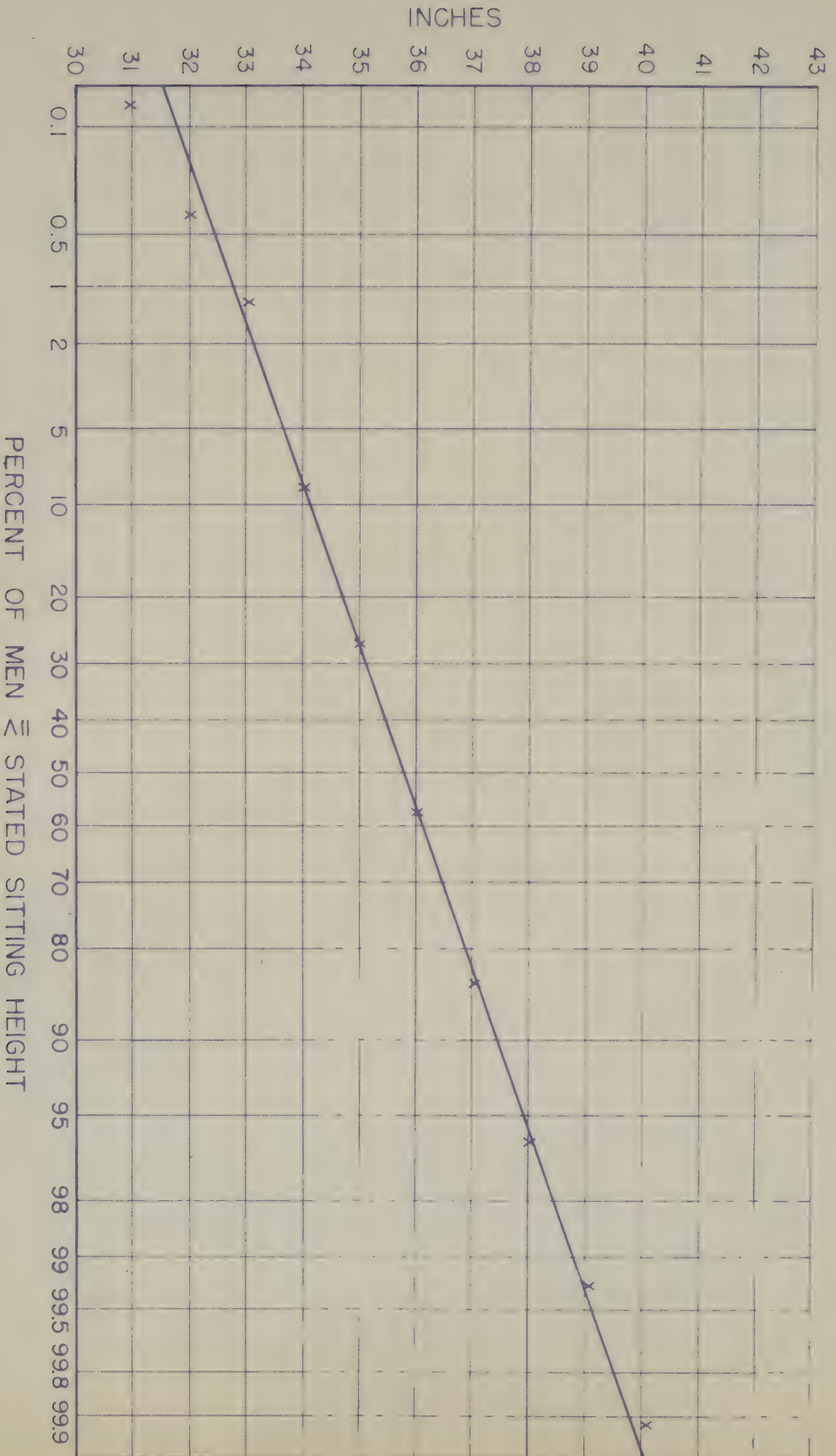
CHART 5  
FREQUENCY DISTRIBUTION  
OF SITTING HEIGHTS, 9758 MEN







SUMMATION DISTRIBUTION OF SITTING HEIGHTS, 9758 MEN

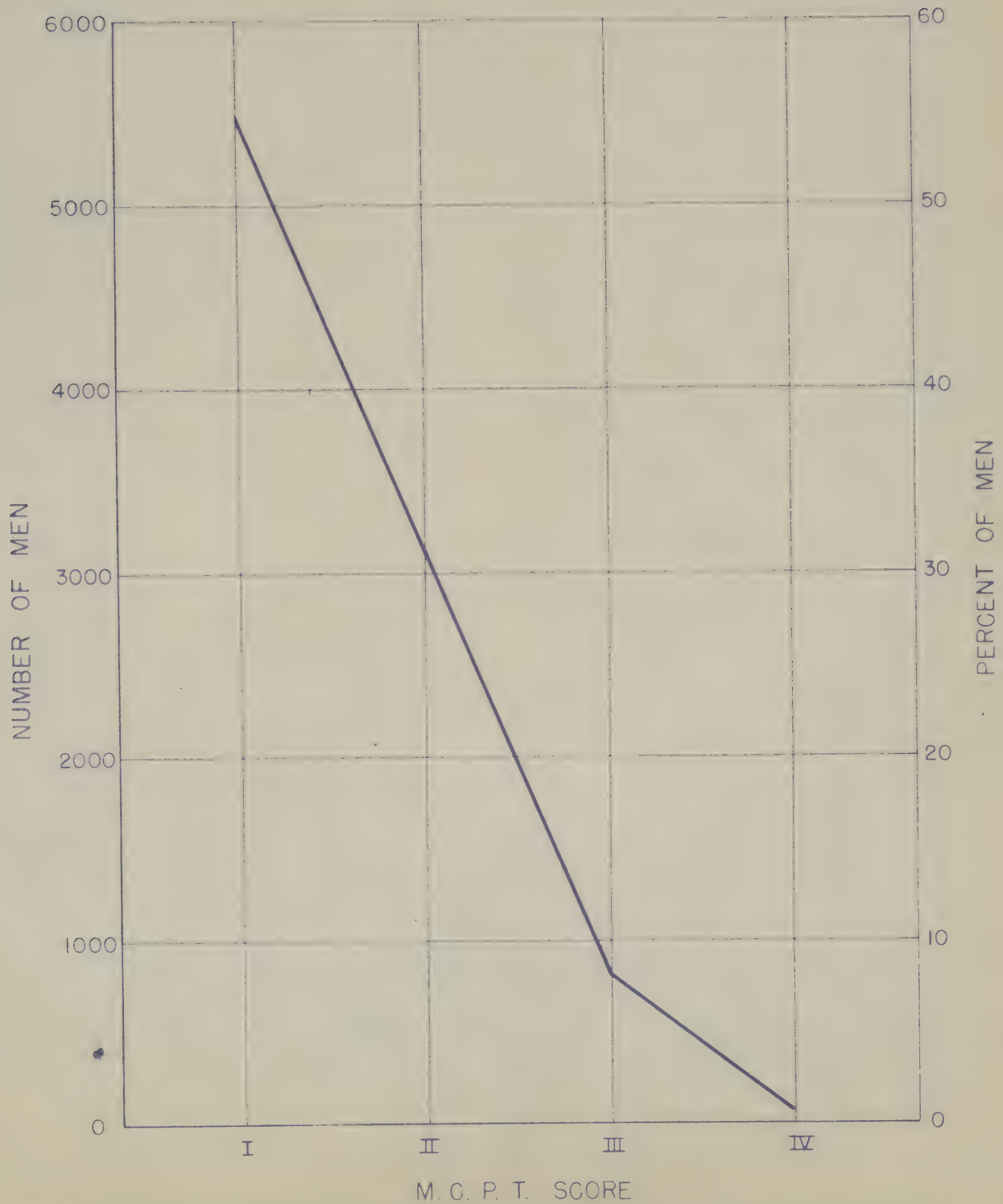






# CHART 7

## DISTRIBUTION OF M.C.P.T. SCORES IN 16 th A.D.





# RELATIONSHIP BETWEEN AGE AND M. C. P. T. SCORE

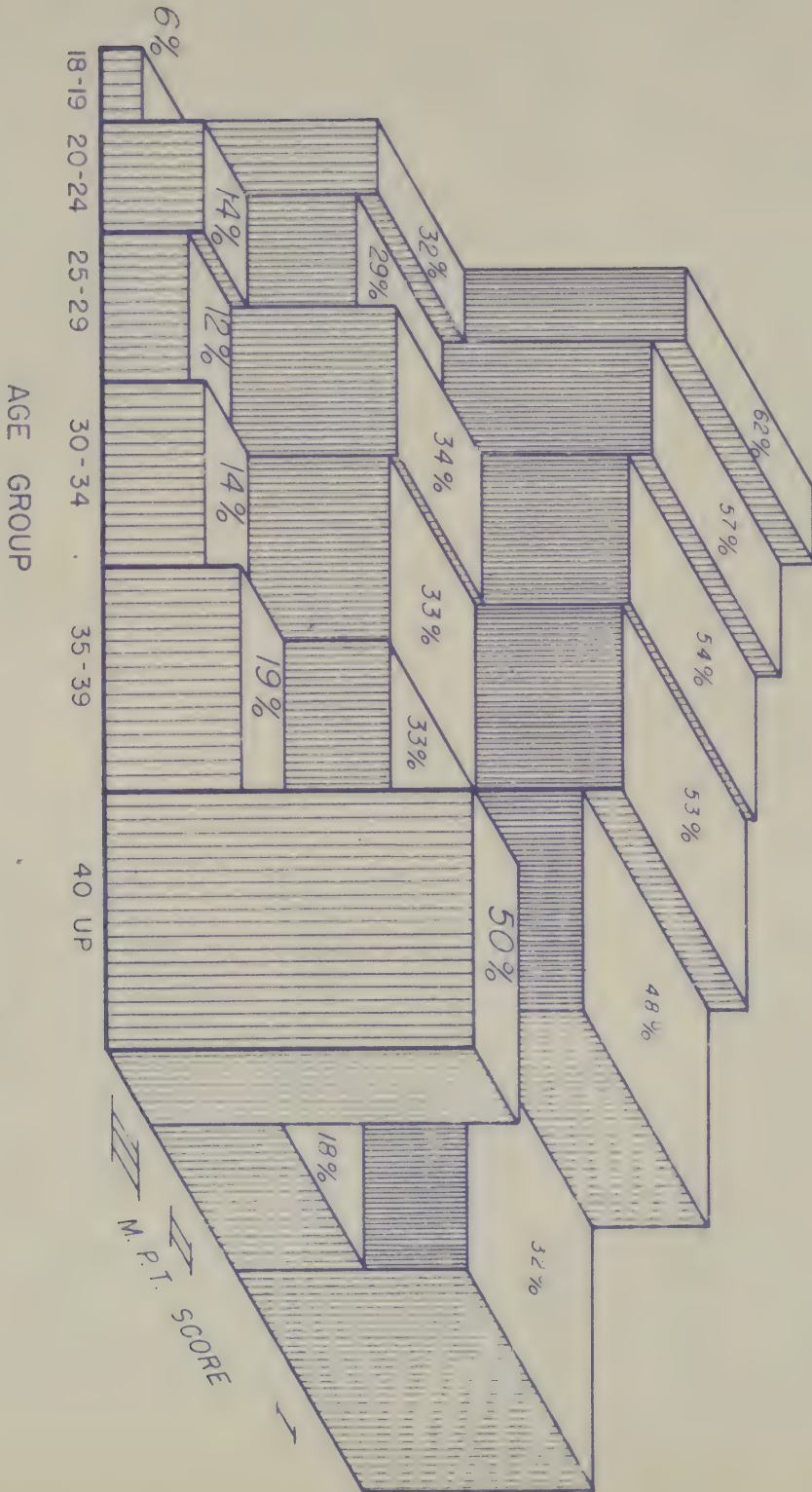


CHART 8





APPENDIX B

HEADQUARTERS 16TH ARMORED DIVISION  
Camp Chaffee, Arkansas

6 November 1943

STANDING OPERATING PROCEDURE  
for  
MEDICAL CORPS PRE-SELECTION TESTS

- CONTENTS -

SECTION I - Introduction and Scope

II - Purpose

III - Organization

IV - Control

V - Area and Housing

VI - Testing Stations

VII - Uniform

VIII - Remarks

IX - Recommendations

X - Summary

*Encl # 2*





# MEDICAL CORPS PRE-SELECTION TESTS

## Section I

### Introduction and Scope

1. All fillers received by the 16th Armored Division, Camp Chaffee, Arkansas, have undergone a series of test procedures known as the Medical Corps Pre-Selection Tests (MCPT). These tests originated and were adapted to Division use by the Armored Medical Research Laboratory, Fort Knox, Kentucky. They are performed in conjunction with, and immediately preceding, personnel classification and assignment of the fillers.

## Section II

### Purpose

1. The purpose of these tests is to weed out the physically unfit men before training begins, to find those men who need minor medical and dental attention, to aid the personnel classification officer in the selection of men for special jobs, and to keep men out of special key jobs who have anatomical limitations rendering them inefficient.

## Section III

### Organization

1. Personnel for the Medical Corps Pre-Selection Tests consists of ten (10) Medical Officers, three (3) Dental Officers, four (4) Medical Administrative Officers, and fifty (50) Enlisted Men. This personnel was organized to supervise and operate the specified test stations, hereinafter enumerated, and to record the data on the MCPT forms carried by the examinee. This group can handle more than 1,000 men each eight (8) hours.

## Section IV

### Control

1. These tests and the flow of men through the stations are expedited by a control group. (Personnel of the control group are not a part of the Medical Corps Pre-Selection Test group.) In this instance the Filler Reception personnel acted as the control group and their help and cooperation was essential to the efficiency and speed of the Test Group. The Control Group marched men in groups of twenty-five (25) fillers to the first test station (Station #1) where the typists initiated the test papers or forms. The group took control again at the "Assembly Station" (Station #12) after the test papers were handed to the "Graders". ( In Appendix A called "Final Scorers").

*Encl #2*



## Section V

### Area and Housing

1. Two barracks buildings of the one-story theatre of operations type, twenty (20) feet by one hundred (100) feet were used to house the actual tests. Adjacent buildings appropriately located in the Filler Reception area were chosen. Two additional barracks buildings, directly opposite, were used for stripping to shorts and shoes, under the supervision of the Control Group.

## Section VI

### Testing Stations

#### 1. Station #1 - Typist Station

Personnel - six (6) typists

Equipment - four (4) typewriters

Space required - fifteen (15) feet (along length of building).

a. At this station the test papers or forms are initiated. The MCPT is prepared in duplicate, and the physical examination form, single copy, added as the third sheet. Headings on all three sheets are so arranged that two short carbon sheets facilitate simultaneous preparation in one typewriter.

b. To expedite work at this station, the examinees form four lines on entering the building and approach the typewriters which are so arranged across the building that there is an aisle between the typewriters. The six typists rotate at the four typewriters so as to avoid fatigue and its consequent errors.

#### 2. Station #2 - Dental Survey Station

Personnel - three (3) Dental Officers

two (2) Dental Assistants

Equipment - two (2) flashlights

tongue depressors

Space required - ten (10) feet.

a. Here dental classification is determined by the Dental Officers and recorded on the physical examination form (3rd sheet) in the approximate space. Two dentists are employed continuously with one reserve and/or relief. Two recorders are employed who also check names against a submitted roster to make sure no one has been missed. Acutely sick dental emergencies may be hospitalized directly from this station if necessary.





b. It should be mentioned here that Unit Dental Rosters (Dental Classification) were prepared at the end of classification, after unit assignment is added to the MCPT papers, by two dental assistants assigned to this detail (See Station #13). The rosters, so prepared, are, of course not in alphabetical order.

### 3. Station #3 - Visual Acuity Station

Personnel - six (6) projectionists

six (6) recorders

one (1) officer in charge (MC or MAC)

Equipment - six (6) projectoscopes, complete with screens

six (6) cardboard discs (for covering one eye)

Space required - twenty-five (25) feet.

a. Six projectoscopes were in operation at this station. Results of the test were recorded in the conventional manner (e.g. OD 20/20 - OS 20/20), on the physical examination form, while the appropriate number representing the score was encircled on the MCPT forms.

### 4. Station #4 - Undressing Station

Personnel - one (1) enlisted man, guide and control

Equipment - two (2) benches, ten (10) feet long

Space required - approximately twelve (12) feet

a. Here the men are instructed to remove shorts and shoes and the guide directs them to an available medical examiner. Shorts and shoes are taken with them and deposited at the examining station to avoid any walking against traffic.

### 5. Station #5 - Physical Examination Station

Personnel - five (5) Medical Officers, examiners

five (5) recorders

Equipment - one (1) stethoscope per officer

Space required - twenty-five (25) feet

a. Here a general superficial physical examination is conducted on each man. This examination includes: (1) head and neck, (2) thorax, heart, and lungs, (3) abdomen, genitalia, and rectum, and (4) extremities. Each examinee is completed by a single Medical Officer, i.e. one medical examiner



completes all elements of the examination on a single individual.

b. The acutely ill and cases of primary and secondary syphilis, if not detected at the initial physical inspection on arrival, are hospitalized immediately from this station. Gonorrhea cases are not excluded but duty status treatment is instituted when detected.

c. Results of the physical examination, with appropriate notes, are recorded on the physical examination form. The examiner converts his findings into a Physical Status Number which he enters in the appropriate space on both MCPT forms.

d. Physical examiners were placed four on either side of the building so that each had approximately six feet of space.

#### 6. Station #6 - Dressing Station

Personnel - one (1) enlisted man, guide

Equipment - two (2) benches ten (10) feet long

Space required - Approximately twelve (12) feet

a. At this station men replace shorts and shoes before leaving the first building. This guide also has charge of the venereal disease list, started by the Medical Officer first inspecting new arrivals. New cases picked up at this examination are added to the list. These are reported to unit surgeons after assignments are made by classification.

#### 7. Station #7 - Depth Perception Station

Personnel - one (1) MC or MAC Officer supervises Station #7 and Station #8

Six (6) enlisted men operate and record

Equipment - Six (6) Keystone eye test machines

Space required - twenty (20) feet

a. Here the eye examination is continued. By means of the Keystone Eye-Test Apparatus, determination of the horizontal eye balance, vertical eye balance, and depth perception is accomplished.

b. Six machines are arranged in a rough rectangle with six operators who do their own recording. Appropriate numbers encircled on the MCPT forms indicate the result.

*Chul # 2*





8. Station #8 - Color Vision Station

Personnel - four (4) enlisted men, testing and recording

Equipment - colored yarn sets (4)

Space required - ten (10) feet

a. Color vision was determined by the use of colored yard sets. The examination consisted of two parts: first, naming the standard colors, and second, matching lighter shades of the same colors. Grades were recorded on both MCPT forms.

9. Station #9 - Sitting Height Station

Personnel - two (2) enlisted men, sitting height operators

two (2) enlisted men, recorders

Equipment - two (2) sitting height apparatus

Space required - ten (10) feet

a. Sitting height was determined in inches and fractions thereof and recorded on both MCPT forms.

10. Station #10 - Reaction Time Station

Personnel - three (3) operators, reaction time

three (3) recorders

Equipment - three (3) apparatus, reaction time

Space required - fifteen (15) feet

a. The more or less standard apparatus wherein the examinee stops a falling board with a spike-tipped broomstick was used. The fall of the board, measured in inches, is the resulting score and is recorded on both MCPT forms.

b. This "reaction time" apparatus requires constant repair and attention since so many factors affect the scoring. The board release should not be visible to the examinee. "Drop boards" wear out rapidly and if the machines themselves are not identical, these boards are not interchangeable. A set, or a supply of boards should be prepared for each machine and made so that the lower end of the drop board extends below the platform. The zero line should be flush with the upper surface of the platform when the board is at rest, and the three drop indicator lines should coincide on the frame and board. The drop indicator lines are three in number, a white line, a black line, and a white line, extending across the frame and drop board at eye level. Each of the three lines should be the same width. The examinee's eyes are directed at these lines and from the breaking of them the reaction time is



measured. Recommend development of a new and much more precise instrument for this test.

c. The spiked sticks should be of standard size (broomstick size) and spikes should be strong and kept sharp. The required excursion of the spike in stopping the board, is 4 inches. It should be remembered that the spike is anywhere from one-half to one inch above the zero mark, varying with the diameter of the broomstick, when the board is at rest.

#### 11. Station #11 - Grading Station

Personnel - three (3) Medical Officers, graders

three (3) enlisted men, paper sorters

two (2) enlisted men, messengers

Equipment - two (2) staplers

Space required - fifteen (15) feet

a. At this station the three forms are handed by the examinee to one of three scorers or graders (Medical Officers), who determine the final score by correlating individual test scores with the Physical Status Number. The final score, the MCPT score, is recorded by encircling the appropriate number on both MCPT forms.

b. Here the papers are stapled together with the original MCPT form on top, the physical examination form on the back.

c. When two groups of twenty five each are completed and in the assembly station (Station #12), the fifty papers are handed to the control officer in charge of the group. He accompanies the group with the papers to Personnel Classification where the papers are again handed to the individual soldier who relinquishes it to the personnel officer when his name is called. It then accompanies his Form #20 through Personnel Classification.

d. Medical Officers at the grading table may also tabulate pertinent information for the Commanding General as requested, i.e. they may be asked to tabulate the number of potential CDD men from each Reception Center, or by state, and secondly, they may tabulate the number of superior men (Physical Status Number 8) by Reception Center or State, etc.

e. Fundamentally, the work of grading requires some knowledge of "spec" numbers and personnel classification.

#### 12. Station #12 - Assembly Station

Personnel - One (1) enlisted man, guide and control

Equipment - benches

Space required - approximately twenty-five (25) feet.

*Incl # 2*





a. This is the assembly station. More space is required here than at the first station because there are times when parts of one group bypass the group ahead. This may happen when certain examinees require additional time to comprehend a technical test or require extra study at the physical examination station.

### 13. Station #13 - Dental Survey Rosters

Personnel - two (2) enlisted men

Equipment - two (2) tables for Dental Survey forms

Space - Located in Personnel Classification Building.

a. This may be an optional station, and is considered a part of MCPT because it tabulates information obtained through this procedure. This station is in the classification building.

b. At this station, dental assistants receive the MCPT forms from Personnel Classification. They first check the MCPT forms to make sure that classification has checked all grade indications (AGC, Code Aptitude, etc.) civilian occupation and recommended MOS as well as unit assignment on both MCPT forms. Next, they write the soldier's name, serial number, and indicated dental classification on the proper unit roster.

## Section VII

### Uniform

1. Fillers reported to the first test station dressed in shorts and shoes only. This is considered maximum attire if speed and efficiency is to be determined. Even with some variation in climatic conditions, there was no complaints or deleterious effects noted from this requisite. Temperature inside was maintained at about 78°F.

## Section VIII

### Remarks

1. With personnel trained and familiar with their work and arranged as outlined above, the output from the test was three hundred per hour with no attempt to hurry or feeling of hurrying on the part of any individual. This, however, is the maximum output of the projectoscopes and the Keystone machines and probably could not be increased by the simple addition of personnel. Besides, it is not felt that this rate of flow is necessary for ordinary purposes. (Classification flow rate normally only 150 per hour).

a. Of all the changes made since the original set-up, the addition of the fourth typewriter caused the most spectacular change in the output, besides taking considerable pressure off the typists.



## Section IX

### Recommendations

1. The following recommendations have been submitted:

a. Medical officers assigned to physical examinations should be officers who have had some experience with a tactical unit. They should be able to recognize men who will not be able to go through the training period and field exercises. New medical officers do not readily recognize the potential CDD cases.

b. Believe some adjustment and change should be made in the definitions of the physical status numbers (physical examination form). While the present numbers are ideal, reclassification is not possible. When a man is hospitalized (physical status number 2) his papers usually go no further than the Physical Examination Station. The Physical Status Number of "4", indicating need for minor medical and dental care, has some ramifications. First, can he go through Basic Training before having the medical or dental treatment or not. Secondly, is there better than an even chance of passing a Port of Embarkation examination after the treatment is completed. Third, in actual practice no dental abnormality alone, will justify an MCPT score lower than "1".

c. It is recommended the Station #13, Dental Survey Roster, be made a part of the MCPT and located in the classification building. Further, that a medical corps officer familiar with the whole MCPT program be in charge. He would not only check completeness of papers as to information added by classification personnel but would also be available to the personnel officer for answering questions arising in connection with certain MCPT grading.

## Section X

### Summary

1. During the period 21 October 1943 to 2 November 1943, fifty-seven hundred (5700) filler replacements were received and processed through Medical Corps Pre-Selection Tests by this Division.

2. During the same period, approximately fourteen hundred (1400) division troops, not previously tested, were processed by the same organization.

3. Approximately fifty (50) hours, working time, was required for processing these men.

4. Seventy-five (75) men, of the filler replacements, were classified as potential CDD cases.

*Encl # 2*





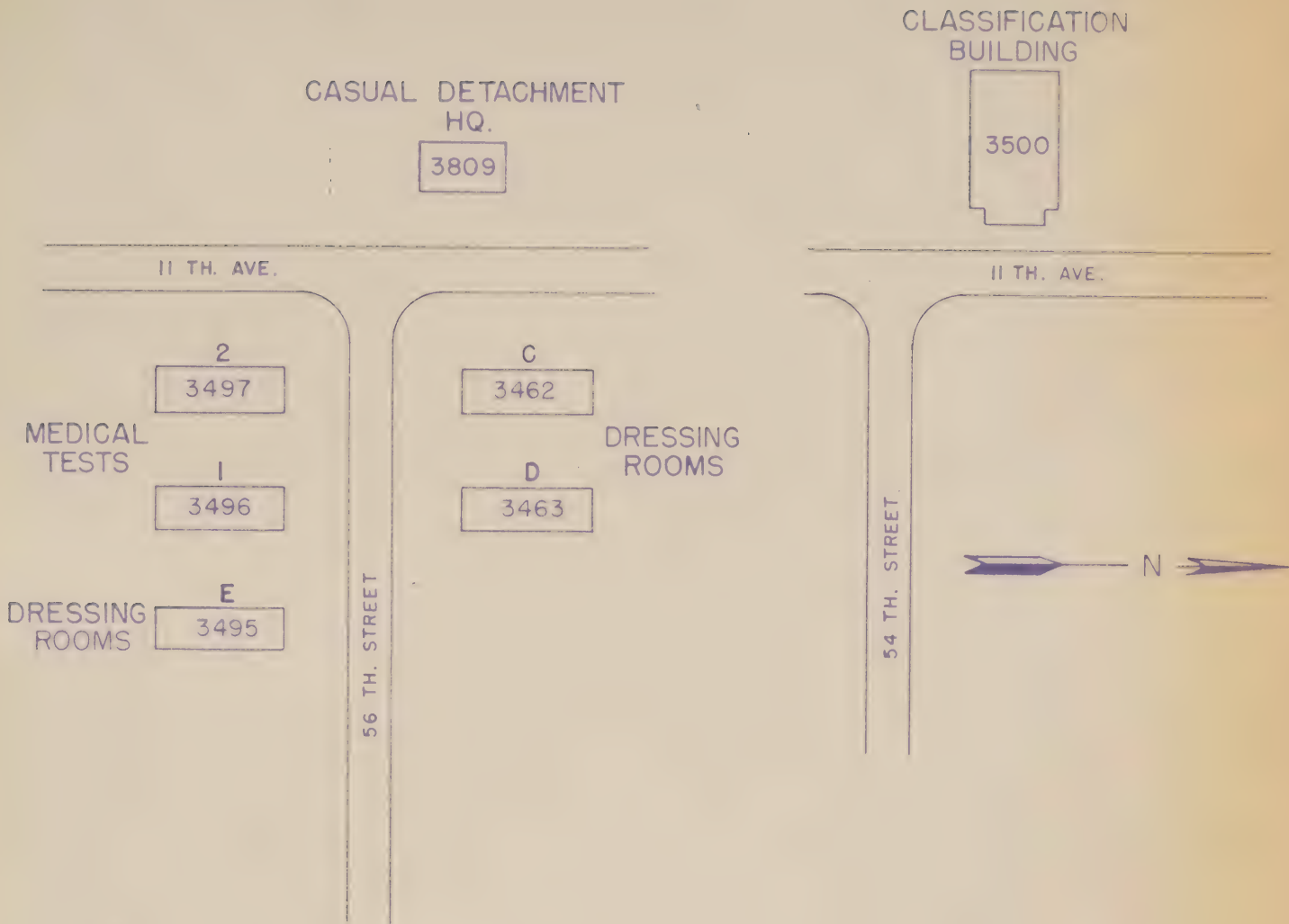
HEADQUARTERS 16th ARMORED DIVISION  
Camp Chaffee, Arkansas

Schedule of Filler Processing  
by  
Medical Corps Pre-Selection Tests

DATE	DAILY TOTAL PROCESSED	AGGREGATE TOTAL
21 Oct 43	700 Division troops	700
22 Oct 43	500 Division troops	1200
22 Oct 43	256 Filler replacements	1456
23 Oct 43	1082 " "	2538
24 Oct 43	162 " "	2700
25 Oct 43	458 " "	3158
26 Oct 43	401 " "	3559
27 Oct 43	792 " "	4351
28 Oct 43	936 " "	5287
29 Oct 43	0 " "	5287
30 Oct 43	1068 " "	6355
31 Oct 43	472 " "	6827
1 Nov 43	59 " "	6886
2 Nov 43	3 " "	6889
2 Nov 43	200 Division troops	7089

Chart # 2

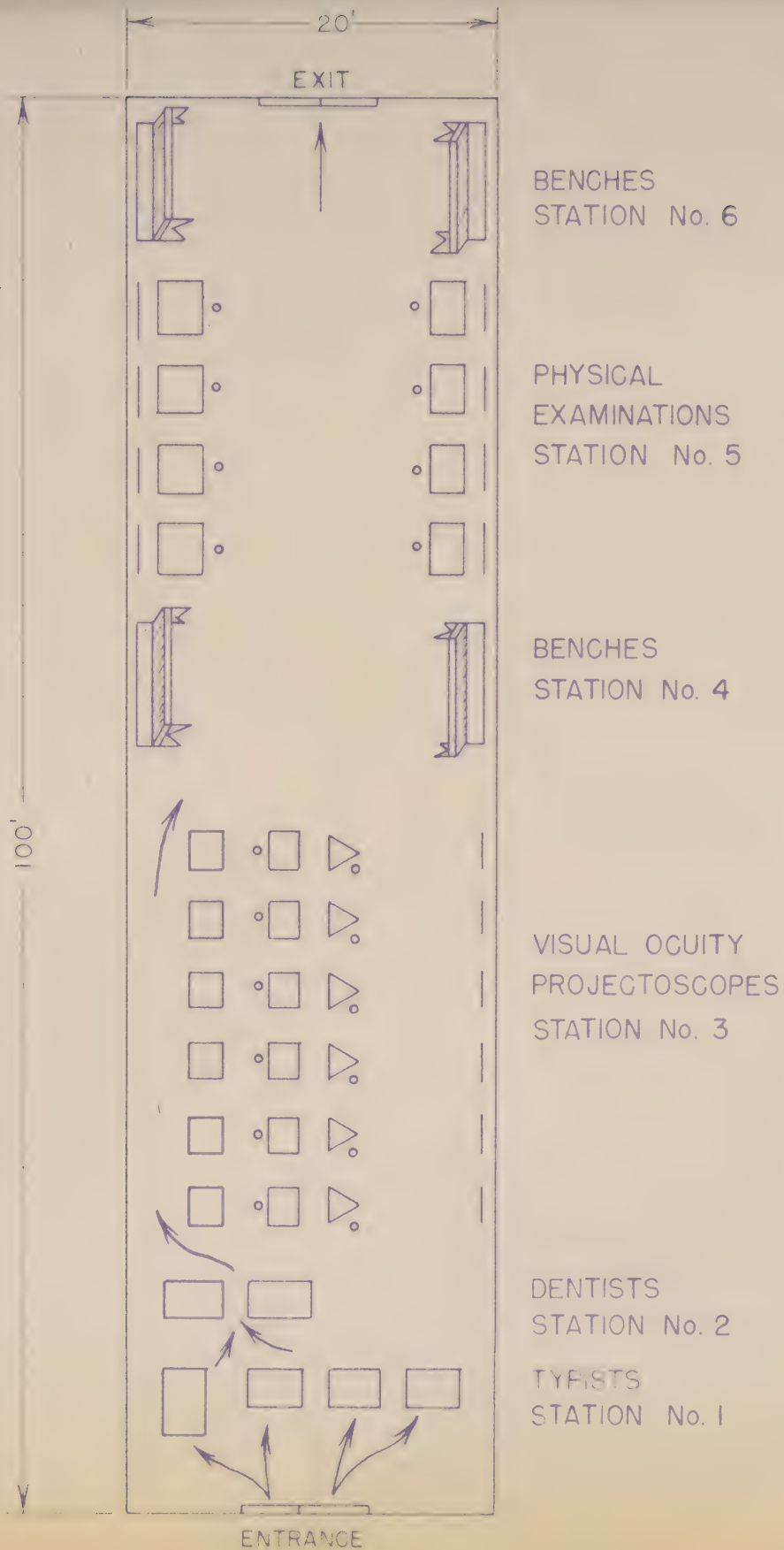




Sheet # 2



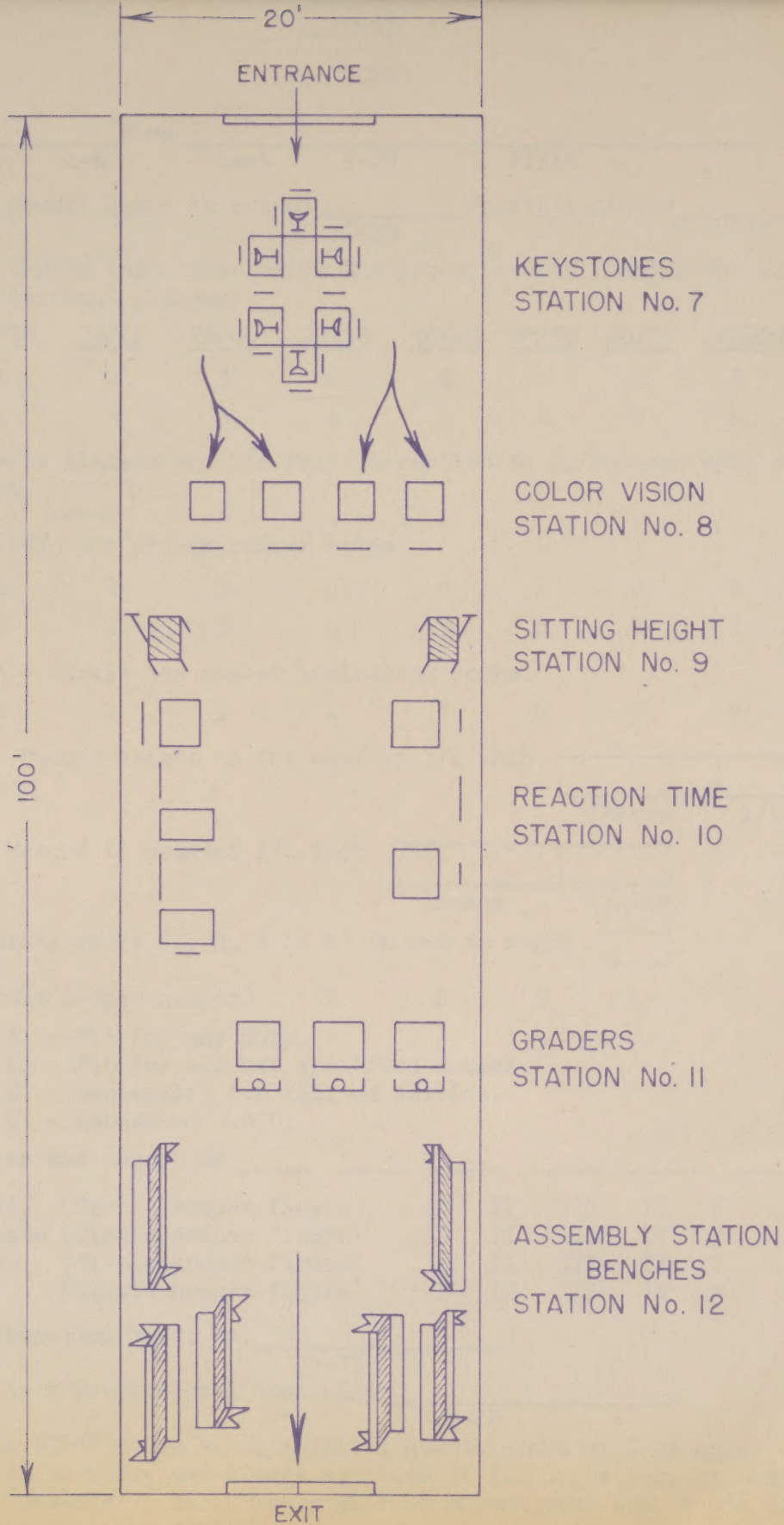




BUILDING No. 1

Sheet 21-11





Sheet # 2

BUILDING No. 2





## APPENDIX C

## MCPST

Name \_\_\_\_\_

Serial Number 1-8 Last 9-29 First \_\_\_\_\_ Middle \_\_\_\_\_

Age 30-31 Number years in school 32-33 Physical status 34

Visual Acuity - Circle the number below the proper acuity reading for each eye.  
(without glasses)

	20/10	20/15	20/20	20/30	20/40	20/50	20/70	20/100	20/200	
Right eye	1	2	3	4	5	6	7	8	9	35-
Left eye	1	2	3	4	5	6	7	8	9	36-

Note: If man wears glasses and has full correction to 20/20 each eye, place check  
(✓) here ☐

Eye Balance - Circle the proper number below.

	1	2	3	4	5	6	7	8	9	
Horizontal	1	2	3	4	5	6	7	8	9	37-
Vertical	1	2	3	4	5	6	7	8	9	38-

Depth Perception - Circle the number indicating score.

1	2	3	4	5	6	7	8	9	
									39-

Sitting Height - Record height to the nearest 1/4 inch

Inches	1/4ths

40-42-

Reaction Time - Record to nearest 1/4 inch

Inches	1/4ths

43-45-

Color Vision - Write score (1, 2, 3 or 4) in box to right

46-

MCPST Score (Circle proper number) 1 2 3 4

68-

- 1 - Class A - Fit for any duty.
- 2 - Class A<sub>1</sub> - Fit for all but specified duties.
- 3 - Class B<sub>1</sub> - Reclassify for limited service.
- 4 - Class C - Recommend C.D.D.

Spec. No.'s duties man cannot do \_\_\_\_\_

Army Gen'l Classif. (Circle proper figure)	I	II	III	IV	V	69-
Mechanical Aptitude (Circle proper figure)	I	II	III	IV	V	70-
Clerical Aptitude (Circle proper figure)	I	II	III	IV	V	71-
Code Aptitude (Circle proper figure)	I	II	III	IV	V	72-

Main Civilian occupation Spec. No. \_\_\_\_\_

73-77

Recommended Military Occupational Speciality \_\_\_\_\_

78-80

Note: If man has MCPST Score of 1, physical status score of 7 or more, an A.G.C. score of II or more, and a code aptitude of III or better, recommend him for Tank Commander - 795. There will be enough such men in the division to fill the required quota.

